

**REVISED POTABLE WELL SAMPLING PLAN**  
**ROUTE 113 RELEASE SITE**  
**LIMESTONE TOWNSHIP, KANKAKEE, IL**  
**WOOD RIVER PIPE LINES LLC**  
**ORIGINAL SUBMITTAL: MARCH 14, 2014**  
**REVISED: MARCH 17, 2014**

This *Revised* Potable Well Sampling Plan has been developed by Wood River Pipe Lines LLC (Wood River) in order to propose the number of potable wells to be sampled and the schedule for future collection of potable well samples near the Route 113 release site, in Limestone Township, Kankakee IL.

Following the accidental pipeline release of gasoline and transmix that was discovered on March 13, 2014, a database well search was performed by Wood River's consultant, Antea Group, information obtained from the Illinois State Geological Survey (ISGS) and information obtained using Illinois Environmental Protection Agency (IEPA) Source Water Assessment Program (SWAP) database software were used to identify potable wells in the area of the release in Limestone Township. Based on this information obtained from the SWAP database and a door to door survey of residences performed by Wood River Right of Way (ROW) personnel, a total of 40 residences nearest (and presumed to be hydraulically downgradient) of the release point were identified to have potable wells and were included in the proposed potable well sampling plan (Figure 1). Antea Group has attempted to sample all residences between March 14 and March 16, 2014. As of the date of this report, a total of 35 residences have been sampled and attempts have been made to sample the other 5 well locations. A list of the 40 residential addresses that were identified to have potable wells in the proposed sampling area, and of the 35 residences that were sampled are summarized on the attached Table 1.

#### Analytical Methods

Potable well samples collected from the area residences have been submitted for volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 524.2 and polynuclear aromatic hydrocarbons (PNAs) compounds via USEPA Method 624. Use of the USEPA Method 524.2 and Method 624 allows for the attainment of low laboratory method detection limits (MDL), generally 0.5 micrograms per liter ( $\mu\text{g/L}$ ) for most VOCs. Future potable well samples will be submitted for similar parameters, although the suite of analytes may be amended based upon new information received regarding the type of product released or review of analytical data for samples collected to date, and submit for review and approval by the Regulatory Agencies. The initial round of potable wells samples were submitted for a 24 hour turnaround time (TAT). Potable well samples collected during the initial response/recovery period will continue to be submitted for a 24 hour TAT.

#### Sampling Methodology

Residential sampling will be conducted in accordance with the IEPA general guidance for collecting water samples (Attachment A). For the initial sampling effort, Antea Group will attempt to collect the water sample from a location closest to the well (i.e. before any water softener systems). For the convenience of the home owners, future samples will be collected at an outside spigot location whenever possible. In general, the following sampling procedure will be used for collection of the potable well samples: If an aerator is present on the faucet or spigot being sampled, it will be removed or bypassed. The water from the faucet or spigot

will be allowed to run for 15 minutes, to ensure water is being collected from the groundwater source. Wearing appropriate latex gloves, the sample will be collected into appropriate laboratory-supplied bottle-ware. For volatile organic compounds (VOCs), the bottle-ware will be 350 milliliter (ml) vials with hydrochloric acid (HCL) as a preservative. PNA samples will be collected into unpreserved one liter amber jars. Immediately upon collection, the sample jars will be properly labeled with the sample location, date and time, and then placed into sample coolers with ice to keep the samples at a temperature below 40° F. A copy of Antea Group's Standard Operating Procedure (SOP) for sampling of residential potable wells is included as Attachment B.

#### Rationalization for Proposed Sampling Area

As stated above, a total of 40 residential homes are currently in the potable well sampling plan. These residential homes are located to the north and northwest of the release point (i.e., in the presumed hydraulically downgradient direction from the release point). Based on information provided by the Kankakee County Sheriff, residences on Indian Trail and Deer Path were confirmed to be supplied public water, did not have potable wells, and thus were not proposed to be sampled.

This *Revised* Potable Well Sampling Plan proposes to not collect potable well samples from wells south of the site (i.e. the Vaughndale and Heil Estates subdivisions) at this time, based on the following rationalization:

- Shell Oil Products US', November 1988 Kankakee Pipeline Release Site is located approximately three (3) miles to the southwest of the Wood River Route 113 Release site. Review of their 2012 Annual Site Status Report for this release, as well as their 2013 Quarterly Reports indicates that regional groundwater flow in the area of the Shell release is generally to the northeast. Based upon review of regional topography and nearby surface water bodies, this is consistent with an inferred northerly groundwater flow direction at the Wood River Route 113 release site, towards the Kankakee River.
- The Vaughndale and Heil Estates subdivision are located more than 2,400 feet to the southwest and 2,200 feet to the south, respectively, from the release site. Based on the inferred northerly flow direction, these subdivisions are presumed to be located hydraulically upgradient of the release site.
- The preliminary analytical results of the initial round of potable well samples collected from 30 residences on March 14<sup>th</sup> through March 16<sup>th</sup> indicated that all concentrations of VOCs were not detected (ND).
- Observations from the excavation during repair of the Wood River pipeline, and during performance of soil borings during on March 15 and 16, 2014, indicates that surficial soils (from 0-2 feet below grade) as well as soils below this depth to the top of the depth at which limestone bedrock is encountered (generally at 2.5 to 3.5 feet below grade) consists of clay and silt, with little fine sand.
- Besides soil impacts noted in the excavations around the pipelines and in surficial areas where product ponded, the delineation soil borings performed around these areas had no evidence of petroleum impacts, indicating that the clayey silt surficial soils are preventing migration of impacts.

Based on the above, Wood River has no reason to suspect that the potable wells located in the Vaughndale and Heil Estates subdivisions could be impacted from the Wood River Route 113 release site at this time. These potable wells are not proposed to be included in the sampling plan at this time. If additional data

becomes available that suggests samplings of these locations is warranted, Wood River will submit a revised sampling Plan to the Agencies for approval.

#### Quality Assurance/ Quality Control

During collection of soil and potable well samples, a duplicate sample will be collected for every ten (10) samples collected (i.e., 10% of samples collected). Each sample cooler will also contain a Trip Blank, which will be analyzed for VOCs to ensure quality assurance/quality control (QA/QC) of sample shipping. A temperature blank will also be included in each of the sample coolers, to ensure samples are maintained at a temperature below 40° F. A Quality Assurance Project Plan/Sampling & Analysis Plan (QAPP/SAP) for sampling procedures at the site is currently being developed and will be submitted for approval at a later date.

#### Proposed Sampling Schedule

The proposed sampling schedule for the 40 residential homes that are currently on the potable well sampling plan is as follows:

Weeks of March 17, March 24, and March 31, 2014: Sampling to be performed twice per week (Monday/Tuesday and Thursday/Friday). Samples will continue to be run on a rush turn around (24 TAT for VOCs) during the initial response activities.

Following repair of the Wood River pipeline and sampling of the potable wells the week of March 31<sup>st</sup>, 2014, the sampling of the potable wells will be completed of the 40 residential wells in the sampling plan on a weekly basis. Following evaluation of the results of the proposed groundwater investigation at the site (i.e., installation and sampling of monitoring wells) and based upon evaluation of the proposed soil sampling results, this schedule will be amended as necessary.

Antea Group will be compiling the data upon receipt, and Wood River, or its contractors, will notify property owners of the results via telephone. In addition to telephone communications, Antea Group will be mailing copies of the analytical data packages to each property owner on a weekly basis during the twice per week sampling period and monthly thereafter. Each analytical data package will be transmitted to the property owner by a cover letter that explains the results of the potable well sampling.

The above schedule can be implemented immediately approval by IEPA and USEPA. Wood River will notify property owners of the sampling schedule upon Agency approval.

## TABLES

TABLE 1  
POTABLE WELL SAMPLE LOCATION SUMMARY

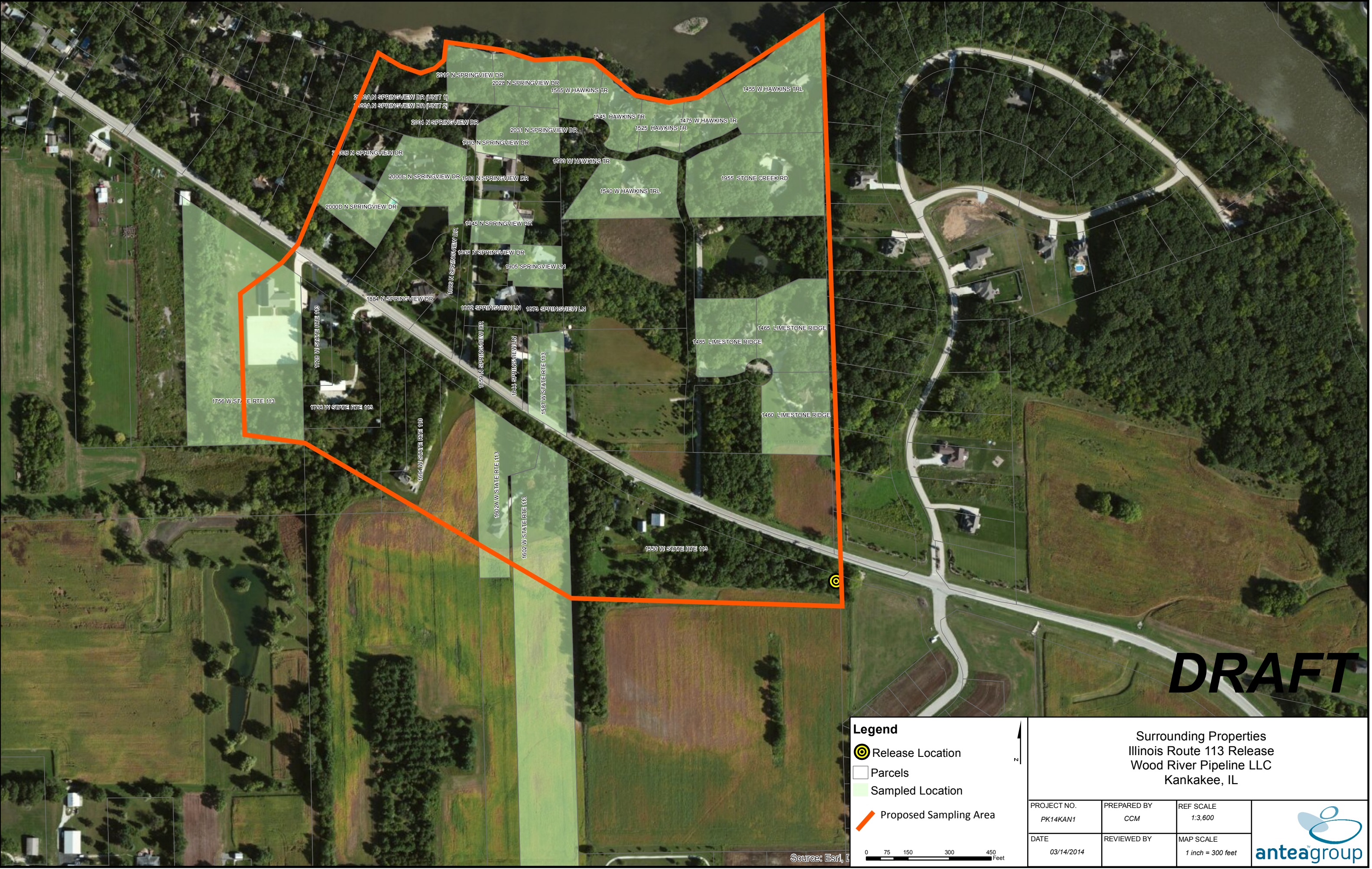
Address	Sampled
1460 Limestone Ridge	Yes 3/14/2014
1465 Limestone Ridge	Yes 3/14/2014
1455 West Hawkins Trail	Yes 3/14/2014
1475 West Hawkins Trail	Yes 3/14/2014
1485 Limestone Ridge	Yes 3/14/2014
1560 West Hawkins Trail	Yes 3/14/2014
1602 W. State Route 113	Yes 3/14/2014
1602(a) W. State Route 113	Yes 3/14/2014
1545 West Hawkins Trail	Yes 3/14/2014
1565 West Hawkins Trail	Yes 3/14/2014
1540 West Hawkins Trail	Yes 3/14/2014
1525 West Hawkins Trail	Yes 3/14/2014
1955 Stone Creek Road	Yes 3/14/2014
1756 W. State Route 113	Yes 3/15/2014
1844 Springview Lane	No
1873 Springview Lane	Yes 3/16/2014
1882 Springview Lane	Yes 3/16/2014
1905 Springview Lane	Yes 3/15/2014
1908 Springview Lane	Yes 3/16/2014
1859 N. Springview Drive	Yes 3/16/2014
1884 N. Springview Drive	No
1886 N. Springview Drive	No

TABLE 1  
POTABLE WELL SAMPLE LOCATION SUMMARY

1945 N. Springview Drive	Yes 3/15/2014
1983 N. Springview Drive	Yes 3/16/2014
1993 N. Springview Drive	Yes 3/15/2014
2000A N. Springview Drive (Unit 1)	Yes 3/16/2014
2000A N. Springview Drive (Unit 2)	Yes 3/16/2014
2000B N. Springview Drive	Yes 3/16/2014
2000C N. Springview Drive	Yes 3/15/2014
2000D N. Springview Drive	Yes 3/15/2014
2004 N. Springview Drive	No
2016 N. Springview Drive	Yes 3/15/2014
2028 N. Springview Drive	Yes 3/15/2014
2031 N. Springview Drive	Yes 3/15/2014
1550 W. State Route 113	Yes 3/16/2014
1728 W. State Route 113	No
1708 W. State Route 113	Yes 3/16/2014
1664 W. State Route 113	Yes 3/16/2014
1587 W. State Route 113	Yes 3/15/2014
1753 W. State Route 113	Yes 3/16/2014

## FIGURES





**DRAFT**

**Legend**

- Release Location
- Parcels
- Sampled Location
- Proposed Sampling Area

0 75 150 300 450 Feet

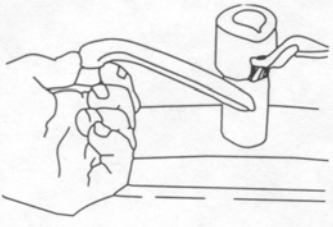

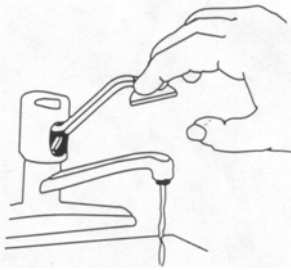
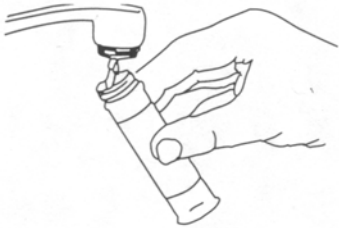
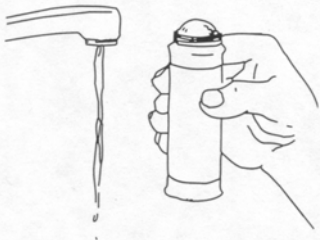


Surrounding Properties  
Illinois Route 113 Release  
Wood River Pipeline LLC  
Kankakee, IL

PROJECT NO. PK14KAN1	PREPARED BY CCM	REF SCALE 1:3,600
DATE 03/14/2014	REVIEWED BY	MAP SCALE 1 inch = 300 feet



## ATTACHMENT A

**General procedure for collecting water samples if testing for volatile organic chemicals** [Illinois EPA cautions private citizens that may try to collect their own water sample: the chemicals for which the sample will be analyzed – volatile organic compounds – may evaporate into the air while drawing the sample, if proper procedures are not precisely followed.] July, 2009

 <p># 1: Remove the aerator from the indoor leak-free cold water faucet</p>	 <p># 2: Let water run for 15 minutes to assure that you are getting water from the ground-water source (where your well is screened below ground).</p>	 <p>#3 Reduce the water flow until the stream is about ¼ inch in diameter.</p>
 <p>#4 Fill a prepared laboratory container as instructed by the lab. Hold the container at an angle to reduce aeration.</p>	 <p>#5 Fill the container until there is a curved surface to the water on top.</p>	 <p>#6 Replace the cap. Avoid trapping air between the sample and the cap.</p>
 <p>#7 Turn the vial upside down and tap. <u>If bubbles appear</u>, take another sample in a new container. If <b>no bubbles</b> appear, transport the sample as instructed by the laboratory.</p>	<p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Samples should be kept in a cooler with ice for transport to the lab.</li> <li>• Do not keep samples longer than 24 hours before taking them to a lab.</li> <li>• <b>If you use a water softener or filter, take the sample from an outside spigot not affected by those. Be</b></li> </ul>	<p><b>sure to disconnect the hose before taking the sample.</b></p> <ul style="list-style-type: none"> <li>• Containers have a special preservative for the volatile chemicals. Do not rinse or reuse lab containers or fill to overflowing.</li> <li>• Always follow the lab directions.</li> </ul>

## ATTACHMENT B



## **Residential Sampling Standard Operating Procedure**

### **Sampling supply checklist**

- |                       |                     |
|-----------------------|---------------------|
| ✓ Cooler with ice     | ✓ Labels            |
| ✓ Box of sample vials | ✓ COCs              |
| ✓ Bubble bags         | ✓ Pen and Sharpie   |
| ✓ Ziplock bags        | ✓ Field Notes       |
| ✓ Box of gloves       | ✓ Local Map         |
| ✓ Booties             | ✓ Sampling schedule |
| ✓ Paper towel         |                     |

### **Tap Sampling**

1. Check notes for any specific sampling time or instructions.
2. Prepare labels and Chain Of Custody (COC) form. Fill out COC prior to arriving at the home if possible (See example field notes, COC, labels and Sample Identification Table)
3. Arrive at address on time, park vehicle so that the resident would be able to leave and access their garage/driveway.
4. Knock on door and have booties in hand ready to put on once you are in the door. Do not put on outside because then they will be dirty.
5. Greet owner, put booties on and have owner escort you to the tap
6. Ask where water is typically run and purge water 15 minutes. If they state that the water is on, please note in your field notes that water was running upon arrival.
7. Sample water
8. Double check that tap is closed tightly and wipe up any access water or spills.
9. Turn off all lights and close doors behind you
10. Place samples on ice and limit time in driveway after sampling activities are complete

### **OUTSIDE SPIGOT**

1. Check notes for any specific sampling time or instructions.
2. Prepare labels and COCs filled out prior to arriving at the home if possible (See example field notes, COC, labels and Sample ID Table)
3. Arrive at address on time, park vehicle so that the resident would be able to leave and access their garage/driveway.
4. Knock on door and greet owner. Inform them that you are there to sample. Ask where the spigot is located.

5. Turn on spigot. Spigot will usually be attached to a hose. Be sure it is water is running in an appropriate location and spigot is not discharging near the home's foundation.
6. Purge water for 15 minutes
7. Disconnect hose (never collect any water sample from a hose) and sample with gloves.
8. Make sure spigot knob is closed tightly
9. Place samples on ice and limit time in driveway after sampling activities are complete